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“SINGLE EURO CASH AREA” (SECA) FRAMEWORK

Abstract	The objective of this “Single Euro Cash Area” (SECA) Framework is to develop a common set of rules and best practices for the distribution and recirculation of wholesale and retail euro cash in the eurozone.
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- March 2002: Common Eurosystem approach to opening hours rules and debiting and crediting rules for cash services at NCB counters
- December 2004: High-level principles as regards NCBs' core functions in the distribution and recirculation of cash
- Decision ECB/2010/14 on the authenticity and fitness checking and recirculation of banknotes¹
- Decision of the European Central Bank of 16 September 2010 on the authenticity and fitness checking and recirculation of euro banknotes (ECB/2010/14), laying down common rules and procedures on the authenticity and fitness checking and recirculation of euro banknotes under Article 6(1) of Regulation (EC) No 1338/2001²
- Guideline of the European Central Bank of 20 July 2012 on the Data Exchange for Cash Services ("DECS") (ECB/2012/16) (2012/502/EU)
- ECB banknote packaging standards

0.1.2 EPC references:

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- Doc EPC-0363/03 (December 2003): Resolution on National Central Banks' core functions as regards cash
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¹ https://www.ecb.europa.eu/ecb/legal/pdf/l_26720101009en00010020.pdf

² Cf. https://www.ecb.europa.eu/ecb/legal/pdf/l_26720101009en00010020.pdf

³ Cf. <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex:32001R1338>

euro against counterfeiting to those Member States which have not adopted the euro as their single currency.⁴

- Regulation (EC) No 2560/2001 of the European Parliament and of the Council of 19 December 2001 on cross-border payments in euro⁵
- Council Decision 2003/861/EC of 8 December 2003 concerning analysis and cooperation with regard to counterfeit euro coins
- Directive 2006/123/EC of the European Parliament and of the Council of 12 December 2006 on services in the internal market
- Directive 2007/64/EC of the European Parliament and of the Council of the EU of 13 November 2007 on payment services in the internal market (Payment Services Directive)⁶
- Commission Recommendation of 22 March 2010 on the scope and effects of legal tender of euro banknotes and coins (2010/191/EU)⁷ Regulation (EU) No 1214/2011 of the European Parliament and of the Council of 16 November 2011 on the professional cross-border transport of euro cash by road between euro-area Member States⁸ Council Decision 2001/887/JHA of 6 December 2001 on the protection of the euro against counterfeiting
- 2010/597/EU: Decision of the European Central Bank of 16 September 2010 on the authenticity and fitness checking and recirculation of euro banknotes (ECB/2010/14)
- Regulation (EU) No 1210/2010 of the European Parliament and of the Council of 15 December 2010 concerning authentication of euro coins and handling of euro coins unfit for circulation
- 2013/211/EU: Decision of the European Central Bank of 19 April 2013 on the denominations, specifications, reproduction, exchange and withdrawal of euro banknotes (ECB/2013/10)
- Regulation (EU) No 331/2014 of the European Parliament and the Council of 11 March 2014 establishing an exchange, assistance and training programme for the protection of the euro against counterfeiting (the 'Pericles 2020' programme) and repealing Council Decisions 2001/923/EC, 2001/924/EC, 2006/75/EC, 2006/76/EC, 2006/849/EC and 2006/850/EC
- Directive 2014/62/EU of the European Parliament and of the Council of 15 May 2014 on the protection of the euro and other currencies against counterfeiting by criminal law, and replacing Council Framework Decision 2000/383/JHA Directive (EU) 2015/2366 of the European Parliament and of the Council of 25 November 2015 on payment services in the internal market, amending Directives 2002/65/EC, 2009/110/EC and 2013/36/EU and Regulation (EU) No 1093/2010, and repealing Directive 2007/64/EC

⁴ Cf. <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32001R1339>

⁵ Cf. <http://eur-lex.europa.eu/legal-content/en/ALL/?uri=CELEX:32001R2560> Cf. http://europa.eu.int/eur-lex/pri/en/oj/dat/2001/l_344/l_34420011228en00130016.pdf

⁶ Cf. <http://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:32007L0064>

⁷ Cf. http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2010.083.01.0070.01.ENG&toc=OJ:L:2010:083:TOC

⁸ Cf. <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2011:316:0001:0020:EN:PDF>

0.2 Change History

Issue number	Dated	Reason for revision
V0.1	13/05/2005	Early version of a working document for initial discussion at 18 May Cash WG meeting
V0.1 bis	06/06/2005	Incorporation of small changes agreed at the 18 May Cash WG meeting
V0.2	12/08/2005	Upgrade of version 0.1
V0.3	15/09/2005	Revision of version 0.2 on the basis of comments received from Cash WG members + Upgrade of chapters 5 and 6.
V0.4	20/10/2005	Upgrade of version 0.3, following the joint meeting with the ESCB Banknote Committee on 27 September
V0.5	27/10/2005	Revision of version 0.4, following the Cash WG meeting of 26 October
V0.6	14/11/2005	Revision of version 0.5 on the basis of comments received by WG members, in preparation for submission to the December Plenary (after review by the Coordination Committee on 24 November).
V1.0	15/12/2005	Submission for national consultation
V1.1	08/02/2006	Preparation of version 2.0, for discussion at Cash WG meeting of 21 February 2006, and after amendments approved at Cash WG meeting of 26/01/2006
V2.0	21/02/2006	Last changes agreed at Cash WG meeting of 21 st February; Circulation of final version to EPC Plenary for approval
V2.0 Approved	08/03/06	Approved by EPC Plenary
V2.7	10/03/15	Full review - Working version
V2.8		Full review - Working version
V2.9	04/10/15	Full review - Working version
V2.9.093	19/11/15	Approved by EPC Board
V3.0	24/12/15	Publication version of V2.9.093 after editorial changes
V4.0	10/05/16	Final publication of V4.0 based on V2.9.093 approved by the 19/11/15 EPC Board reviewed afterwards by the legal counsel and the CEWG mainly for editorial reason

Executive Summary

The present landscape for the distribution of euro cash is characterised by the coexistence in the Single Euro Payments Area (SEPA) of multiple national infrastructures, organised at national level and based on different business models. Thus there is currently no Single Euro Cash Area for credit institutions and other professional cash handlers. This is an issue as:

- cash remains in most countries the most popular yet amongst the most expensive payment instruments to operate,
- as the cost of cash is often being imperfectly externalised to actual users, the usage of cash may thus be cross-subsidised by other bank revenues, contributing to burdening the pricing of other banking services.

As national legacies differ widely across the eurozone, with current National Central Banks (NCBs) operational rules and conditions still reflecting this diversity, the Eurosystem has already initiated a harmonisation process. In this context, the objective of the SECA Framework is to define:

- taking a “user perspective”, banking industry requirements for core cash services provided by Eurosystem NCBs,
- a common set of banking best practices for the efficient distribution and recirculation of euro cash in the eurozone.

This will shape the “Single Euro Cash Area” (SECA) where banks will be enabled to exercise their responsibilities with respect to both wholesale and retail cash in a more efficient way also taking into account business objectives. The migration from the current to the SECA landscape will however require a reasonable adaptation period, in view of national legacies and the heavy investments that characterise the cash processing industry (depreciation of the cost of the fixed assets over several years).

A constructive dialogue between the Eurosystem (ESCB Banknote Committee - BANCO) and the European banking industry (EPC Cash Efficiency Working Group) takes place about how to achieve a greater harmonisation of Eurosystem NCB operational conditions.

Capitalising on the cooperation model between the ECB and the EPC, the dialogue should be pursued on the issues highlighted in the SECA Framework. In order to create a level playing field, basic functions performed by NCBs in Europe need to be interchangeable - i.e. sustaining a practical test: it must be possible to handle coins and banknotes, and access the services it offers, all through the eurozone, in whatever country, without any practical obstacle, thus creating the same practical effects than a common eurozone-wide infrastructure for cash (“virtual” infrastructure).

Establishing the level playing field (the “Single Euro Cash Area”) requires:

- structuring principles to be agreed and implemented: access to NCB cash services across national borders, sufficient network coverage, interchangeability of services as regards lodgings and withdrawals of coins and banknotes, advanced information interface and feedback between NCBs and banks, and stability of services and operational conditions.
- the harmonisation of a range of NCB operational conditions: authenticity control policy, cash quality control, penalties for lack of compliance and dispute resolution processes.

Once these principles and harmonised operational conditions have been defined by the Eurosystem in dialogue with banks, the way in which they are implemented in each country or group of countries, notably the level of outsourcing, can be a decision for each NCB -

provided that due remuneration is received by the banking industry for the core functions it will perform in place of an NCB.

Within SECA, banks will continue to acknowledge the crucial importance of, and their obligations, to distribute only genuine and quality cash, an imperative to maintain confidence of the general public. Banks share the understanding that customers should be educated about the societal cost and risks of cash, progress towards enhanced cash processing efficiency should be monitored, a high quality of cash in circulation maintained, and coordinated actions in the fight against counterfeiting and for the protection of the euro sustained.

As third parties have a significant role to play in enhancing cash processing efficiency, the SECA Framework identifies a range of best practices that banks should take into account when outsourcing part of their cash processing activities. The SECA Framework also proposes a dialogue with third parties' representatives on issues of common interest, notably: designing common initiatives against euro counterfeiting, reaching a common understanding on standardisation issues, and identifying ways on how to contain or reduce the societal cost of cash.

Finally, a range of eurozone-wide standards will be required to achieve SECA. Most priorities have already been achieved and some standards have been delivered (e.g., common definition of fit/unfit euro banknotes), but others are outstanding e.g., standards for cash degradation systems, coins and banknotes packaging, security requirements for euro cash transportation and testing procedure/criteria for cash handling machines. What matters in this respect is *interchangeability*. For each area where a standard requirement has been identified, the Framework describes - from a banking industry perspective and at a high-level - the standard to be delivered and lists the relevant standardisation activities.

1 Preamble

1.1 Objective of this Framework

Europe has become a Single Euro Cash Area (SECA) since 2002. The objective of this Framework is to define, taking a user perspective, banking industry requirements for core cash services provided by Eurosystem National Central Banks (NCBs) for regulations set by the European Commission as well as to define a common set of banking best practices for the efficient distribution and recirculation of euro cash in the eurozone. The mutual overall goal being to keep euro banknotes and coins available to the public in a way that the public can fully trust this means of payment, can use it in a secure way and at acceptable costs. So that the euro is and stays a daily life, powerful, tangible symbol of European unity, identity and cooperation.

The European banking industry, in keeping with the co-operation model established with the Eurosystem and a user of NCB services, is keen to be consulted and bring in its expertise in their design. On the other hand the banking industry will itself develop efficient best practices in cooperation with its commercial partners.

The overriding objective of this SECA Framework is to see these goals effectively implemented by 2020.

1.2 One Single Cash Area

“The euro is part of the everyday life of European Union (EU) citizens from 19 different countries. It has been in circulation since 2002 and is used by over 337 million people for their daily requirements, to save for tomorrow and to invest in the future. It is now the most important currency in the world after the US dollar. There is no other example of such deep and large-scale monetary cooperation between sovereign countries. The euro is a major achievement of European integration: economic integration and solidarity of this kind were indeed unthinkable in the past. By 2020 there will be a new generation of young adults who will have grown up using only the euro as their national currency.”⁹

1.2.1 The euro as a European symbol

Euro is more than a currency. It became a strong daily life European symbol.

- Unity in rules towards the public

In 2009 the Payment Service Directive (PSD) came into force. This directive sets rules for Payment Service Providers (e.g., credit institutions) on how to inform their customers on transactions, protects customer rights when a dispute occurs and regulates debiting-, crediting- and value-dates for transactions. Regarding the latter, a special article is dedicated to cash transactions. The PSD also sets rules on how to become a Payment Service Provider, which need to be licensed. Through this directive consumers and businesses have the same rights concerning Euro payments throughout Europe and know that they are dealing with trustworthy payment companies. On 23 December 2015, the revised Payment Services Directive (PSD2) was published in the Official Journal of the European Union.¹⁰ The PSD2 should be transposed by EU Member States in national law by 13 January 2018, as of which date the PSD will be repealed.

⁹ “The European Union explained”

¹⁰ Directive (EU) 2015/2366 of the European Parliament and of the Council of 25 November 2015 on payment services in the internal market, amending Directives 2002/65/EC, 2009/110/EC and

- High quality and reliability of the banknotes and coins

The Eurosystem has set up several policies and regulations since 2002 to maintain the euro as a reliable means of payment¹¹. Banks and their professional Cash handling partners have adapted these policies and regulations. Euro users can be certain that genuine and qualitatively good banknotes and coins come out of the cash machines. Unfit banknotes and coins are returned to the NCBs for controlled destruction. All professional bank staff and cash machines are equipped to recognize and take in counterfeited notes and coins, keeping counterfeiting to a very minimal level. The introduction of new series of euro banknotes, and adapting cash machines to these new notes contributes to the quality and reliability of euro cash.

- Good accessibility 24/7 and nearby

All throughout the eurozone a change is visible for the last 15 years in banking infrastructure. For cash services banks move over from teller transactions to self-serve cash transactions at cash machines (ATM) that are 24/7 at the disposal of the public. The cash services are also not restricted to the bank branch anymore, as cash machines are also placed in shopping areas, in large retail shops and high traffic public places. Interbank agreements provide the possibility to easily make a cash withdrawal at almost any ATM at hand, not being your own bank ATM. The same goes for making a withdrawal in a foreign country.

- Harmonisation of cash handling

Since the year 2002¹², several regulations provide that cash recirculation between banks and NCBs can be done in a harmonised and efficient way throughout the eurozone. In some countries a balance sheet relief (BSR) is introduced to shorten the cash-chain. On the other hand banks and commercial cash handlers and ATM manufacturers have developed efficiencies in the cash cycle, e.g., introducing cash- and device-management systems, multifunctional and recirculation cash machines and a concentration and professionalisation of cash handling in regional cash centers. These innovations are however not yet common use, and could benefit from further harmonisation.

1.3 The use of euro cash is declining in favour of other means of payment

Cash remains in most countries the most popular payment instrument in terms of number of transactions.

In December 2015 18,9 billion euro banknotes were in circulation (€ 1.083 bn) and 116,2 billion euro coins (€ 26,0 bn). And used by 335,6 mio users in the eurozone¹³. The euro

2013/36/EU and Regulation (EU) No 1093/2010, and repealing Directive 2007/64/EC: http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=OJ:JOL_2015_337_R_0002&from=EN

¹¹Decision ECB/2010/14 https://www.ecb.europa.eu/ecb/legal/pdf/l_26720101009en00010020.pdf

¹²Common Eurosystem fee policy for cash transactions of professional clients at NCB counters (2002), differentiating between free-of-charge services and charge-incurring services

Common Eurosystem approach to opening hours rules and debiting and crediting rules for cash services at NCB counters (2002)

Regulation on Cross border Transports (2010), providing the possibility for Cash in Transit companies to work across national borders, enabling more economies of scale and competition

¹³ European Central Bank statistics

currency is used as means of payment at the POS (C2B), but also for settlements between private persons (P2P) and hoarding.

The use of other means of payment at Point of Sale (POS) is still increasing as per the World Payment Report¹⁴: "People have a preference to use debit and credit cards at the POS for high volume transactions. In some countries this is mandatory for transactions higher than a certain amount. New and fast growing are mobile and e- payments. Europe has reached a mature phase in the usage of non-cash payments, with a yearly growth slightly declining to 4% in 2012 (87,6 bn transactions). Predictions are, due to increase of e- and m- payments, that the growth rate will stabilize at an annual 5%.

There are big differences in the use of non-cash means of payment between euro (zone) countries, varying from approximately 60 payments (Italy) up to 450 payments a year per inhabitant (Finland).

The outlook for 2020 is that cash might diminish in use in some regions (Western and Northern Europe for example), but will elsewhere continue to be used for cultural reasons." In euro countries where cash is not the preferred means of payment anymore (Netherlands, Finland) it is sometimes argued that it seems to find its balance in a 40/60 divide of cash/card transactions. Nevertheless the banks in these countries still have to maintain a considerable and costly cash chain, consisting of a network of ATMs and deposit machines, cash centers and cash transportation. Questions rise whether this can be maintained in the near future where customers make less and less use of the services and as crime, fraud and regulations are constantly increasing the cost of ownership.

1.3.1 Challenges to Cash

Declining use of cash forms a challenge to maintain the existing quality, reliability and accessibility of cash against existing costs

Cash remains in most countries the most popular yet the most expensive payment instrument to operate, as illustrated by the societal costs it involves. Notwithstanding the improvements that have already been implemented, the current landscape for the distribution of cash is still characterised by multiple national infrastructures organised at a national level and based on different business models. Efforts should be made in order to improve and achieve a Single Euro Cash Area. It is proposed to address this challenge from two angles: harmonising NCB operational conditions (thereby developing, as an output, a virtual cash infrastructure at eurozone level), and enhancing the processing efficiency in the cash chain through targetted actions.

1.3.2 Cooperation between stakeholders

1.3.2.1 EU and governments:

- "e-government initiatives are emerging as key enablers of non-cash payments. In countries where a mature e-government combines with developed non-cash payments infrastructure and behaviour, conditions are especially ripe for e-government payments to spur overall non-cash payments usage. This may have a knockout effect in areas of the market still relying on outdated technologies."¹⁴
- Furthermore, governments can stimulate digital payments throughout the society which will have a decreasing effect on cash transactions and spending will be better traceable to fight the grey economy and increase tax revenue.

¹⁴ World Payments Report 2014. www.worldpaymentsreport.com. Cap Gemini and The Royal Bank of Scotland.

- EU should create a level playing field by issuing regulations that enhance efficiency.

1.3.2.2 NCBs

- The basic functions performed by NCBs in Europe need to be interchangeable, i.e., sustaining a practical test: it must be possible to handle coins and banknotes issued by a NCB, and access the services it offers, all through the eurozone, in whatever country, without any practical obstacle (such as packaging), thus creating a common eurozone-wide infrastructure for cash ("virtual" infrastructure). It is not acceptable that, as far as these functions are concerned, regulations differ from country to country. An important step has been achieved but still has to be developed with the Regulation (EU) No 1214/2011 of the European Parliament and of the Council of 16 November 2011 on the professional cross-border transport of euro cash by road between eurozone Member States.

1.3.2.3 Consumers

- Consumers and representatives of consumers (e.g., consumer associations) should accept a fair share of the cost of cash related to the personal use of that commodity. In return they can still rely on the availability of cash 24/7 everywhere with a high level of quality and convenience in the future.

1.3.2.4 Retailers

- Taking cost and safety into consideration, retailers should adapt freely their offer of means of payment to consumers. They often overlook the real costs of cash payments (personnel and security costs), only looking at transaction and communication fees of non-cash payments. Banks play a pivotal role in making retailers aware of the business case for moving away from cash and in steering parties toward non-cash payment instruments. A world that is becoming increasingly unsafe (more robberies) is an important element in this discussion.
- Retailers located in border areas may expect from SECA an enhanced competition between their cash service providers, thanks to the possibility to be serviced by a bank or a CIT company on a cross-border level within the eurozone rather than being limited to their country of location. If such competition was effective, it would allow a decrease in prices.

1.3.2.5 Professional Cash Handlers

- Professional cash handlers (PCHs) are third parties in the cash processing chain, as they undertake activities outsourced by the banking industry. Banks indeed remain the sole intermediary of central banks in the cash distribution chain, whilst both banks and central banks often resort to outsourcing in order to increase the efficiency of their operations. PCHs have become a reality in the market and their requirements/expectations shall be taken into consideration as well in particular given the heavy investments required for undertaking cash handling activities.
- PCHs are allowed the possibility to have cross-border business activities within the eurozone in order to be able to reap economies of scale at the level of the SECA, enhance the efficiency of their operations and provide a better service to their customers (Regulation (EU) No 1214/2011). But cash services remain regulated by national laws that significantly differ from one country to the other (e.g. security requirements, employer's liability insurance for cash transportation). Harmonisation of NCB operational conditions is also essential to allow PCHs to conduct cross-border deposits and

withdrawals at NCB branches, with a prior harmonisation of procedures, standards, control and audit criteria for cash centers.

- In the process chain, the PCHs are expected to perform an efficient cash service and logistically advanced device management (e.g., ATMs, CRMs, and Cash deposit machines).

1.3.2.6 Banks

- Banks bring in expertise in risk management, compliance and transaction management. Rationalising cost of cash is an ongoing process. Standardisation of cash services to the public and to enable more self-service cash transactions / machines will reduce costs.
- Leaner and faster processes will contribute to higher efficiency and lower cost: efficient Cash Management, efficient Incident Management, eliminate or reduce costly intermediate steps (local recirculation), create economies of scale by outsourcing or multibank cash money processing and handling.

1.4 Purpose and objectives of this framework

- Define the way to pan-European efficiency in cash infrastructure and logistics, through realizing more scale efficiencies for the industry (effective cross-border services, NCB regulation, standardization)

The original banking industry vision for Cash in SEPA is expressed in the Cash Working Group *Findings and Recommendations* (pp.16-19), unanimously approved by the EPC Plenary in January 2003. The vision statement still stands. In particular, it shall be restated that *“the euro will not be the single currency as long as there are significant differences in the treatment of wholesale cash within national borders, nor as long as the provision or sourcing of cross-border wholesale and retail cash services is not possible under the same conditions than the provision or sourcing of equivalent domestic services”*. Meeting this objective requires a harmonisation of Eurosystem NCB operational conditions, the development of common standards at eurozone level and the removal of legal barriers preventing an effective cross-border cash service. The Regulation on cross-border transport of euro cash by road is a first step to open up borders for CIT companies. Legal barriers still have to be removed: SECA should be supported by harmonised security legislation. There shouldn't be maximum constraints on the amounts transported, other than security or insurance maximums of the cars or companies. There shouldn't be a constraint on the number of visits abroad. CIT companies should be able to plan transport routes within SECA efficiently.

The operational conditions of NCBs should become equal all around the SECA zone: equal packaging types, barcoding, seal numbering, standard volumes, etc. The ECB should provide a standard 'price list' for the services provided by the NCBs, included the services that are free of charge.

- Aim at efficient activities throughout the cash handling chain (undoubling activities, like counting, transport: condition Balance Sheet Relief of any form; cash management, device management, etc.).

One of the advantages of SECA is the rising opportunity to use or adopt existing national cash management models. In several European countries there exist cash management companies (CMCs) which all have the goal to gain better productivity by elimination of redundancies, reduction of intermediaries, establishing of end-to-end processes, and implementation of state of the art technology. Existing borders, national regulations and different national NCB rules are obstacles on that way.

At present, there are different local and national market practices and regulations across Europe regarding the limitation of cash payments to certain denominations or maximum amounts or the exclusion of cash as a means of payment for certain transactions. SECA aims at harmonising these different practices at a pan-European level.

- Rationalize bank infrastructure in conformity with the public need (accessibility in accordance with less cash usage; new forms of distribution in cooperation with Cash Management Companies)
- Promote active support of governments for the digitalization of society, indirectly supporting non-cash transactions

The growing e-Government services and use of internet based administration transactions (e.g. passport applications, tax matters, drivers' licenses, car registrations, etc.) will create a higher acceptance of digital payment methods and therefore support the use of non-cash transactions.

- Find solutions for the perceived disadvantages of non-cash transactions in some payment contexts
- **Remove barriers that pre-empt direct pricing of cash services**

Maximum society and economic efficiency can only be achieved when payment instruments can freely compete against each other for customer acceptance on the basis of their own merits (i.e. convenience, price, security...). Cash should therefore be treated as any other payment instrument: at every step the pricing of related services must reflect their costs to the provider(s), whilst not forgetting from a fair cost-sharing perspective the society dimension of cash (in terms both of minimum access to payment capability and ultimate back-up instrument). This objective can only be met if legal restrictions to the free pricing of cash transactions by banks are removed.

2 Definition of the target model

Cash remains in most countries the most popular yet amongst the most expensive payment instruments to operate, as illustrated by the societal costs it involves. Notwithstanding the improvements that already have been implemented, the current landscape for the distribution of cash is still characterised by multiple national infrastructures each organised at a national level and based on different business models. Efforts should be made in order to improve and achieve a Single Euro Cash Area. It is proposed to address this challenge from two angles: harmonising NCB operational conditions (thereby developing, as an output, a virtual cash infrastructure at eurozone level), and enhancing the processing efficiency in the cash chain through targeted actions. A number of inhibitors will however have to be overcome before the target can be reached.

2.1 Scope

Currency and denominations	This Framework covers euro (EUR) banknotes and coins of all denominations.
Geographical reach	The focus is on the eurozone. However, the Framework could have side-effects for non-euro countries as well (e.g. standardisation aspects); the latter countries have thus been invited to participate in the discussions at banking industry level.
Practices	The Framework focuses on developing common rules for wholesale cash services, but also sets a number of best practices in the area of retail cash. Both the provision and the sourcing of cash services, cash distribution and cash recirculation practices, are addressed under the present Framework.
Implementation	In some areas, decisions by the Regulators will be needed. In others, recommendations will be implemented by self-regulation.

2.2 Models to improve efficiency

2.2.1 Cooperation model between banks and central banks

The need of cooperation with the Eurosystem should be underlined.

The introduction of the euro has changed the configuration of the dialogue between banks and central banks. On the retail side, issues e.g., related to the quality of cash in circulation or to the protection of the euro against counterfeiting are now indeed common to all countries and require an appropriate dialogue interface at the eurozone level, as well as joint actions. From this perspective, the Eurosystem needs a reliable partner on the European banking industry side, a role attributed to the EPC Cash Working Group (cf. Recommendations approved by the EPC Plenary in January 2003) and reconfirmed by the EPC Board through the establishment of the EPC Cash Efficiency Working Group.

There has been since the beginning of the year 2004 a constructive dialogue between the Eurosystem (ESCB Banknote Committee - BANCO) and the European banking industry (EPC Cash Efficiency Working Group) about ways to achieve a greater harmonisation of Eurosystem NCB operational conditions. Following an initial high-level discussion about the

EPC resolution on NCB core functions as regards cash, the dialogue between BANCO and the Cash (Efficiency) WG has been mainly focused on the preparation of the Eurosystem Framework on cash recirculation, adopted by the ECB Governing Council in December 2004 replaced by an ECB decision of September 16, 2010. After this fruitful experience, and capitalising on the cooperation model built between the Eurosystem and the EPC in the cash handling area, it is believed that the dialogue should continue.

2.2.2 A “virtual” eurozone-wide cash infrastructure

The basic functions performed by NCBs in Europe need to be interchangeable - i.e. sustaining a practical test: it must be possible to handle coins and banknotes issued by a NCB, and access the services it offers, all through the eurozone, in whatever country, without any practical obstacle (e.g., packaging), thus creating the same practical effects than a common eurozone-wide infrastructure for cash (“virtual” infrastructure). It would not be acceptable either that, as far as these functions are concerned, some national banking industries must comply with direct or indirect obligations that are more stringent. Another important step has been achieved but still has to be developed with the Regulation No 1214/2011 of the European Parliament and of the Council of 16 November 2011 on the professional cross-border transport of euro cash by road between euro-area Member States.

2.2.3 Processing efficiency in the cash chain

Given the costs involved at each step of the chain (transport, sorting, storage...), the shorter the cash processing chain the more efficient the process. But in most cases, the existing cash handling process runs through merchant, credit institution, CIT Company and NCB, with thus 4 participants in the process chain. For instance: in the first step, the merchant processes the cash for paying in at the credit institution; there, the cash is again processed for delivery to the CIT Company; the CIT Company gathers the cash paid in at a bank, processes it and pays the money in at the NCB; the NCB processes this money once again and undertakes the final check for counterfeit money on all payments received. It is obvious in such a case that shortening the cash processing chain would allow greater efficiency.

The objective should thus be to reduce whenever possible the number of participants in the processing and distribution chain. For instance, the promotion of direct contracts between merchants and CIT Companies, when appropriate, would allow cash to be delivered directly to cash centers. National banking communities are encouraged to review the cash processing chain model in use in their market, to measure its efficiency and propose ways to increase the latter.

So, efforts should be made in order to recognise the importance of BSR (Balance Sheet Relief) mechanisms at EU level to minimise the cost for the banking industry of storing euro banknotes and coins to meet its demand. It is also important that regulation takes into account the impact on costs and efficiency of the cash cycle.

Another way to shorten the cash cycle is the introduction of more recirculation machines in both the banking sector and the retail sector.

2.3 Implementation options

Once NCB core functions have been defined by the Eurosystem in dialogue with banks, the way in which they are implemented in each country or group of countries, i.e. notably the level of outsourcing, is the decision of each market¹⁵ - provided that full remuneration is received by the banking industry for the core functions it will perform instead of NCBs.

¹⁵ Cf. principle # 2 (Decentralisation) of the EPC Resolution on “National Central Banks’ core functions as regards cash”

Even if we acknowledge that past investments, central bank organisation, cash-in-transit market, geographical distances... differ in each of the countries, a progressive convergence is taking place.

Different models currently exist in the market and will thus have to be taken into consideration by national banking communities. In reality, there is not always a strict distinction between two models, rather, some forms of combinations are possible. However we may distinguish between six "generic" models. For more insight on these models, we refer to the study entitled "Improving the Efficiency of the Handling of Cash - Cash Cycle Models" that is downloadable on the EPC website¹⁶.

In the same way, banks will have full flexibility on the way they organise their internal cash processes and on the extent they outsource the latter to professional cash handlers.

2.4 Inhibitors

A number of inhibitors have to be taken into account on the road towards a genuine Single Euro Cash Area. In particular:

- The current legal framework is still not completely adapted to the new SEPA environment: the cross-border sourcing/provision of cash services (including cash transport) in the eurozone has been regulated but still has to be improved.
- There are still in many countries legal restrictions to the possibility for banks to charge for cash withdrawals and deposits (at ATMs and/or OTC).
- Founding this argument on national traditions and legacies, some NCBs remain reluctant to abandon their "national arrangements", which puts at risk a Eurosystem coordinated approach.

There are also barriers from a security point of view.

Removing these inhibitors will require coordinated efforts by the regulators, the EPC and other stakeholders.

¹⁶ <http://www.europeanpaymentscouncil.eu/index.cfm/knowledge-bank/epc-documents/improving-the-efficiency-of-the-handling-of-cash-cash-cycle-models/>

3 European banking industry Requirements for Eurosystem Cash Services

One of the basic tasks of the Eurosystem under the Treaty on the Functioning of the EU is to promote the smooth operation of the payment system (operator, overseer/regulator and facilitator). The Eurosystem is neutral with regard to the different payment instruments. It does not favour one instrument over another. However, the Eurosystem central banks have a special responsibility for cash, as they are the official issuers of euro banknotes. In addition, most of them put into circulation the euro coins, which are issued by the Member States. Therefore, the Eurosystem is committed to supporting cash as a generally available, easy-to-use, reliable and efficient means of payment. Within its sphere of competence, the Eurosystem monitors and continuously seeks to promote the safety, resilience and efficiency of the euro area cash cycles.

Legally, both the ECB and the national central banks of the euro area countries have the right to issue euro banknotes. In practice, only the national central banks physically issue and withdraw euro banknotes (as well as coins).

The ECB is responsible for overseeing the activities of the national central banks (NCBs) and for initiating further harmonisation of cash services within the euro area, while the NCBs are responsible for the functioning of their national cash-distribution systems. The NCBs put banknotes and coins into circulation via the banking system and, to a lesser extent, via the retail trade.¹⁷

Hereafter, the criticality of the various dimensions of Central Banks' services have been assessed and ranked in function of, on the one side, their structuring or rather operational aspects, on the other by order of priority from a banking industry perspective with a view of establishing a level playing field.

3.1 "Structuring"

3.1.1 Access to any Central Bank cash services across national borders

The euro is the common currency of eurozone citizens. It is appropriate that the banking industry, as the appointed distribution channel of that currency, obtains a non-discriminating and unfettered access to any Central Bank cash services (i.e., possibility to open an account with another Eurosystem NCB), irrespective of the location of any given bank and Central Bank within the eurozone. This is of particular importance to banks located in border areas, which must be able to select on the basis of their business rationale the Central Bank (or branch thereof) with which they operate for cash deposits or withdrawals. Furthermore, in this case of cross-border NCB access to cash services, banks should not be subject to the reserve requirements of the other NCB.

From a crisis management and business continuity point of view, an international framework has to be defined by all the actors and regularly tested. Having common rules among European countries is beneficial due to the potential interoperability of cash activities (including cross-border solutions).

3.1.2 Network coverage

Eurosystem NCBs should maintain a branches' network large enough to allow operators optimal access to cash (banknotes) in terms of distance, time, security risks and population distribution. The core responsibilities of the NCBs may be entrusted to joint ventures or

¹⁷

<https://www.ecb.europa.eu/pub/pdf/other/legalaspectsescben.pdf?7d0bebbba3a230b3e7aa9223328c1f25c>

external service providers, but should remain under the responsibility of the NCB, including its financial liability.

It is recommended that in case of a network restructuring, the Eurosystem NCBs involve as early as possible the banking industry and other third parties in order to reduce the operational and logistic impacts of such project, notably by studying all solutions to bring down the total cost of the cash chain.

It is acknowledged that the notion of “sufficient network coverage” becomes less of a requirement for those countries where the NCB has authorised an NHTO (Notes Held To Order) scheme or other Cash Facilities Management, providing that a fair remuneration for the replacement of the cash services is assured.

3.1.3 Lodgings and withdrawals of notes and coins

Procedures and conditions governing lodgings and withdrawals of notes must be adapted to banks’ user requirements and harmonised across the eurozone, so that interchangeability of services is ensured.

Examples of such procedures and conditions include:

- Frequency of deposits and orders of notes (including incomplete containers).
- Coin lodgements: a harmonisation is needed among Eurosystem countries.
- Time lag from order to implementation: cut-off times for ordering cash (coins and banknotes) vary across eurozone countries’ NCBs.
- Possibility to use IBNS technology equipments for depositing/withdrawing banknotes at NCB branches.
- To have a unique banknotes packaging among Eurosystem countries instead of having so many different ones, even if common packaging exists between several neighbouring areas.

3.1.4 Information Interface and feedback between NCBs and banks

The Data Exchange for Cash Services (DECS) routes and converts electronic cash messages between commercial banks and cash-in-transit companies located in one euro area country and NCBs located in another.¹⁸

DECS is a solution to have open standards for both access to and content of information across the eurozone (e.g., a TCP/IP and XML based solution, using data modelling to structure data flows), whilst avoiding an over-regulation of interface specifications.

DECS is not widely used because the current regulation does not allow appealing and efficient cross-border transport.

3.1.5 Stability of services and operational conditions

Cash handling normally entails significant investments by the banking industry, and market participants thus need stability of NCB services and operations conditions for planning purposes with regard to investment decisions. Investments are usually depreciated over a period of about 7 years. For all of the parties concerned (NCBs, banks, CIT companies and customers) there is therefore a need for stability of the services offered, in order to guarantee service efficiency.

¹⁸

http://www.europeanpaymentscouncil.eu/index.cfm/newsletter/article/?articles_uuid=CE29DCCC-5056-B741-DBF61B1EEA2315E9

Any major unilateral modification with an impact on investments' amortisation and recovery period (e.g., new generation of banknotes, or new policy as regards cash recirculation) must be announced well beforehand and follow a proper consultation of market participants. Failing that, banks must be allowed to fully reflect in their pricing propositions the impact of the residual value of past investments.

Of course banks do acknowledge that this is a fast moving environment - in particular as regards prevention and fighting counterfeiting - so that from time to time decisions may be required that will not conform to the principle formulated in the above paragraph.

3.1.6 Issuance of new generations of banknotes

The Eurosystem is responsible for the definition and issuance of new generations of euro banknotes. As the latter entail non-marginal costs for the banking industry (adjustment of banknote-handling machines, ATMs, etc.), a proper consultation of market participants and an in-depth impact assessment have to be organised beforehand in order to limit as much as possible the impact on costs.

Since the first E/S 2 banknotes launched (5 € in May 2013), an improvement of cooperation among all the actors (ECB, NCBs, banking sector, CIT Companies, Manufacturers...) has been experienced to better prepare the following ones.

For the higher values (100€ and 200€), it is strongly advised that these two new banknotes will be issued in the same cost-efficient package, and not on an annual basis as currently done. (According to the ECB decision¹⁹, the 500€ banknotes will not be part of the second series ES2)

3.2 Operational conditions: a harmonised Eurosystem Service Level

The non-harmonisation of core responsibilities as well as, ceteris paribus, mostly unchanged NCB revenues generates imbalances between Member States, and between payment instruments across the eurozone. The distribution of Eurosystem revenues is indeed based on fixed criteria that are highly independent from the range of services provided by the National Central Banks (Article 32 §2 of the Protocol on the Statutes of the ESCB and the ECB). In the present shifting environment, it is therefore highly necessary, in order to prevent further damaging market distortions, to define a harmonised set of National Central Banks' core responsibilities related to banknotes.

3.2.1 Opening hours of NCBs

It is acknowledged that the Eurosystem already put in place minimum NCB opening hours, but comparing actual opening hours of Eurosystem NCBs still shows wide differences across the eurozone, hence the need for opening hours that are adapted for both national and cross-border requirements.

A dialogue between all the actors will define the best time windows according to market needs and available resources. NCBs should offer all its "core functions" services to banks during this time window, at a national level and of course on a pan-European basis. This helps in improving cross border activities.

3.2.2 Authenticity control policy

The possibility of recirculating euro banknotes enables banks and other cash handlers to supply the currency in a more effective and cost-efficient manner. To ensure the integrity

¹⁹ ECB Press release - ECB ends production and issuance of €500 banknote - <https://www.ecb.europa.eu/press/pr/date/2016/html/pr160504.en.html>

of the banknotes, the ECB has adopted the Decision ECB/2010/14 on the authenticity and fitness checking and recirculation of euro banknotes.

This Decision became applicable on 1 January 2011, replacing the "Framework for the detection of counterfeits and fitness sorting by credit institutions and other professional cash handlers". It has been amended by Decision ECB/2012/19 of 7 September 2012 to extend its scope to the authenticity and fitness checking and recirculation of new series of euro banknotes and to clarify a few requirements.

This new Decision ensures that credit institutions and cash handlers only recirculate euro banknotes if they have been checked for both fitness and authenticity under specific procedures.

It is important to note that euro coins are not affected by Decision ECB/2010/14, as they do not fall within the ECB's competence.

However, these obligations cannot be discriminatory compared to what is allowed for non-banking institutions, and the Eurosystem policy as regards the deployment of third-party ATMs should in this respect be reviewed.

The sharing of information on euro counterfeiting between banks and central banks remains also to be explored in order to improve the fight against counterfeiting. Meanwhile, costs of such a fight are expensive for banks without any "return on investment".

3.2.3 Quality control

The Decision ECB/2010/14 on the authenticity and fitness checking and recirculation of euro banknotes provides common rules and requirements for manual and automated fitness sorting by banks. This implies that the quality control is globally shared by the banking sector and the NCBs (even if each NCB can operate some specific additional controls) and that all must strive to avoid duplication of controls between the participants.

3.3 Charging principles

The ECB has confirmed in its Decision ECB/2010/14 that the notion of "free of charge" services, by opposition to "charge-incurring" services is still applicable.

Meanwhile, the exclusive mandate devolved to NCBs and Treasuries for the issuance of banknotes and coins generates operational costs but also substantial incomes in the form of 'seigniorage'.

By having shared the NCBs core functions with the "private" sector, it is anticipated that this seigniorage may be used to cover part of the costs of the banking sector by providing these cash services free of charge to customers.

The exact scope of these notions has not been fully spelled out by the ECB and would require clarification: for instance, are the lodgings of unfit coins/banknotes or the change of stained banknotes free of charge services?

Once these principles are clearly set, it is indifferent who performs the core functions of the Eurosystem, provided National Central Banks bear the costs of at least those functions that have been deemed core (even if these functions are entrusted to an external service provider).

National Central Banks could furthermore continue offering additional services, albeit expectedly at market conditions.

3.4 Coins handling in SECA

3.4.1 Issuance of euro coins

Unlike banknotes which are issued by the ECB, euro coins are issued by the euro area countries. In general the issuing body is the treasury in the national finance ministry, the producing body is the national mint. The NCBs put the coins into circulation and manage the lodgings and withdrawals of coins.

The ECB approves the volume and the value of coins that euro countries may issue each year.

In addition to the regular coins, countries may issue a commemorative 2-euro coin once a year to celebrate a subject of major national or European relevance. These coins are legal tender throughout the euro area and can be used in the same way as regular coins for cash payments.

Countries can also issue collector coins which are only legal tender in the country of issuance, but are not intended to circulate and to be used for cash payments.

This governance and organisation is the cause of some problems:

- the national mint can limit the production of some denominations of coins. This obliges the NCB to limit the distribution of some denominations of coins causing shortages on the national market, obliging commercial banks to look for provision at the NCBs in the neighbouring countries. The provision from abroad can be hampered by different transport regulations between the neighbouring countries.
- the NCBs are not inclined or can even refuse to arrange transfers of coins between NCBs to avoid shortages in some countries of some denominations as this has an impact on the seigniorage of national countries, showing that a common market for euro coins on wholesale level is not yet realised.
- collector coins: euro collector coins are legal tender only in the country of issuance but as some are used in circulation this can lead to confusion for the public. In some countries they are confused with commemorative coins. These collector coins imply operational issues and additional costs for the banking sector, having the obligation to accept them at the bank branches. It should be prevented as much as possible that collector coins be used for regular payments.

3.4.2 Legislation

The regulators took some steps to harmonise the handling of euro coins:

- Regulation No 1210/2010 of 15 December 2010 concerning authentication of euro coins and handling of euro coins unfit for circulation: lays down procedures necessary for the authentication of euro coins and for the handling of euro coins unfit for circulation.
- Recommendation of the European Commission on legal tender of coins (2010/191/EU - Official Journal L83 of 30 March 2010):
 - Collector coins: keeping the present status for euro collector coins (legal tender in state of issuance) while inviting Member States to take all appropriate measures, if needed, to try to prevent collector coins from being used for cash payments.
 - The legal tender of 1- and 2- cent euro coins and rounding rules: rounding rules up to 5 cents, to avoid the use of 1 cent and 2 cents, should be avoided.

3.4.3 Wish list

- The challenge to improve or achieve a SECA for euro coins can be addressed from 3 angles:
- Harmonising the European rules for euro coins:
 - As for banknotes the Eurosystem should make arrangements between Member States to favour transfers of coins between NCBs to avoid shortages in some countries of some denominations. In other words the Eurosystem should create an agreement regarding the seigniorage of euro coins.
 - Member States should be able, in conformity with the needs of the public and banks, to deviate from the recommendations set in the Legal Tender for 1ct and 2ct coins, and to adopt rounding rules up to 5 cents, as already implemented in some euro countries.
 - Regarding collector coins, “Recommendation of the European Commission on legal tender of coins (2010/191/EU - Official Journal L83 of 30 March 2010)” should be the rule in all countries of the eurozone.
- Harmonising NCB operational conditions:
 - Coin lodgements should be possible at each NCB, regardless of the origin of the coins.
 - Time lag from order to implementation: cut-off times for ordering coins to NCBs vary across eurozone countries. In the case of euro coins, a pre-notification of several days is even sometimes required. These requirements should be set up in a harmonised and efficient way.
 - Possibility for the banks to choose the quantity of coins wanted per denomination when ordering a withdrawal: in some countries the NCB puts limits on the quantity that can be delivered for 1 and 2 euro cents. There should not be shortage of coin denominations at retail level across the eurozone.
 - Euro coins imported from the NCB of another member state must be allowed to be put in circulation without any supplementary requirements of the local NCB
- Enhancing the processing efficiency in the cash chain through targeted actions:
 - SECA banks should be provided an effective form of Balance Sheet Relief on the coins that they hold in recirculation
 - Campaigns could also be organised by national banking communities and NCBs to collect/recirculate unused low euro coin denominations (1 and 2 euro cents);

Member States should continue to take actions to avoid that countries outside the eurozone issue coins which look like coins circulated by the Eurosystem.

4 Common understanding of banks' responsibilities

Banks are fully aware of the crucial importance of continuing to distribute only genuine and quality cash, and of their obligations in this respect. The confidence of the general public in the currency is indeed critical to the well-functioning of the economy.

4.1 Monitoring progress towards enhanced cash processing efficiency

Resources used in the cash chain are a synonym for costs for banks, since there are often no direct revenues from the provision of cash services. Nevertheless, efficiency²⁰ is about optimising resources, i.e. minimising resources used for a given service level.

Resources used by banks in the area of cash processing are composed of equipment, staff, inventory, as well as transport, insurance and security costs, and shall be divided between the incoming side (cash deposits, sorting, recirculation) and the outgoing side (cash withdrawals by customers at the counter or at ATMs). Whilst it is acknowledged that obtaining a fully "scientific" costing of cash to society is a challenge, rough cost estimates were delivered by various studies.

However, in the cash area, efficiency is not only about process efficiency (e.g., automation, codification): cash handling is indeed a 'heavy' industry by nature, and another way to optimise resources is to limit the volumes of cash handled. One way to do this is to encourage customers to use alternative means of payment (e.g., cards). Another way can be to limit the float/stocks of cash in the process: this can be done by developing cash recirculation and shortening the cash cycle. A number of concrete best practices in this area have been identified by the EPC as it is expressed in different documents: [EPC section "SEPA for Cash"](#)²¹ e.g., shortening the cash processing chain, developing cash recirculation, developing cash management, optimising ATM performance, outsourcing cash processing, optimising teller operations, optimising CIT services, automating coins processing, etc.

In addition, the EPC in cooperation with the European Security Transport Association (ESTA) published in 2013, a document entitled "*Improving the Efficiency of the Handling of Cash - Cash Cycle Models*"²² where best practice principles were identified and, where possible, recommendations were developed on how to further improve deployment and re-circulation of cash were reflected. The input from different parties representing various stakeholders active in the commercial cash cycles (e.g., payment service providers, cash-in-transit companies and retailers), aimed to create awareness of how to improve existing processes and reduce the overall cost of cash through a Balance Sheet Relief (BSR) mechanism. In particular, according to the document, the three cooperation structures that widen the spectrum of potential improvements within the cash cycle are: **the partial delegation, total delegation and partial transfer model**. These three models provide logistical cost optimisation opportunities for the National Central Bank and the commercial cash cycle participants and allow flexibility for developing customised cash services. In addition, they facilitate the direct exchange of excess cash among the different commercial participants. Finally, these models also achieve balance sheet relief for those commercial cash cycle participants involved.

²⁰ Here understood as x-efficiency: the effectiveness with which a given set of inputs (means, staff, transport security, insurance, and inventory) is used to produce outputs (cash services). If a bank is producing the best service it can give the resources it employs (depends on the targeted service level), and the best technology available, it is said to be x-efficient.

²¹ EPC Website : <http://www.europeanpaymentscouncil.eu/index.cfm/sepa-for-cash/>

²² Doc EPC-037-13

In the same way, the EPC in cooperation with the ATM Industry Association (ATMIA) developed a paper called *"Improving the Efficiency of the Handling of Cash - International Best Practices for ATM Cash Replenishment"*.

4.2 Maintaining a high quality of cash in circulation

The fitness of banknotes and coins is in accordance with the national legislation part of banks' commercial policies and thus one of the key aspects of the cash service to their customers; it is therefore a parameter that banks cannot afford to set aside: not only would poor quality banknotes generate blockage at ATM-level, but also distributing unfit banknotes would be detrimental to banks' commercial image.

However, for those banknote and coin denominations that are not returning to the banks due to a longer cash cycle, some specific initiatives could be and were undertaken by European banks in order to increase the level of quality of these denominations in circulation.

As the two lowest banknote denominations (€5 and €10) are generally subject to higher wear and tear in circulation, it is e.g., recommended that these denominations are regularly dispensed to retailers and the general public to ensure a good quality of banknotes in circulation. The recent release of the second series of 5 €, 10 € and 20 € euro banknotes, called the "Europa" series²³ has definitely led to a positive and easier withdrawal of the first series. Furthermore, National Central Banks may enable credit institutions and other professional cash handlers to make deposits of unfit banknotes 5 €, 10 € and 20 € in a more simple packaging.

4.3 Coordinated actions in the fight against counterfeiting and for the protection of the euro

Since the introduction of euro banknotes and coins in 2002, the number of banknotes in circulation has risen to over 18.8 billion, with a face value in excess of €1 trillion. This makes the euro an attractive target for counterfeiters both within and beyond the European Union and, as such, the need to combat counterfeiting in a pre-emptive and proactive way is self-evident.

The fight against cash counterfeiting is a combined task of all participants in the cash cycle and law enforcement, judicial and banking authorities must collaborate. The banking industry acknowledges its role in this field, and supports joint actions with other stakeholders.

In line with the conclusions of the Seminars on Fighting Euro Counterfeiting across Europe, it is notably proposed that banks:

- Continue the dialogue with the competent authorities and favour a common approach in the implementation of Regulation 1338/2001/EC, the Decision of the European Central Bank of 16 September 2010 on the authenticity and fitness checking and recirculation of euro banknotes (ECB/2010/14) and Regulation (EU) No 1210/2010 of the European Parliament and of the Council of 15 December 2010 concerning authentication of euro coins and handling of euro coins unfit for circulation.

²³ The European Central Bank (ECB) and the national central banks (NCBs) of the Eurosystem introduced a second series of euro banknotes, started with the €5 banknote in May 2013, the 10€ banknote in September 2014 and the 20€ banknotes in November 2015.

- Take internal measures related to planning, information, training, auditing and organisation, so as to optimise the protection of the euro.
- Identify best practices in the area of the protection of the euro and integrate them into the EPC set of banking best practices.

Finally, the Regulation²⁴ establishing an exchange, assistance and training programme for the protection of the euro against counterfeiting (the 'Pericles 2020' programme) in which the representatives of the national central banks, the mints, commercial banks and other financial intermediaries, in particular as regards the obligations of financial institutions can participate, may be a useful tool to all the involved parties.

4.4 Principles for remuneration of interbank services

One of the key underlying principles for establishing sound conditions to construct a healthy SEPA environment for all payment instruments is the capability for banks to price the services they are providing, **also to each other**, in keeping with free market and competition law principles.

4.5 Reporting requirements

Following Eurosystem's concerns regarding the lack of reliable statistics as regards retail and wholesale cash handling, the European banking industry has expressed readiness to contribute to data collection for cash recirculation activities provided that the statistical requirements and subsequent administrative burden remain limited, and at any rate proportional to the intended benefits.

Section 2.7 of the "Eurosystem Framework for the detection of counterfeits and fitness sorting by credit institutions ("CIs") and other professional cash handlers" ("PCHs"), has defined in general terms the data to be regularly provided by the latter to NCBs. This general requirement has subsequently been transposed by a Joint Task Force - composed of representatives from the Eurosystem, the EPC and the ESTA - into a detailed reporting table²⁵.

The number and value of ATM withdrawals, as well as the number of ATMs, are already reported to the Eurosystem and resulting statistics are already part of the ECB "Blue Book".

4.6 Debate on the societal cost of cash

Banks should take an active part in the debate on the societal cost of cash, but this debate should involve *all stakeholders* (not only banks), including Central Banks, national Governments, retailers and consumers - as has already been initiated in some countries (e.g., Belgium²⁶, Netherlands²⁷ and Norway²⁸).

²⁴ Regulation (EU) No 331/2014 of the European Parliament and the Council of 11 March 2014 establishing an exchange, assistance and training programme for the protection of the euro against counterfeiting (the 'Pericles 2020' programme) and repealing Council Decisions 2001/923/EC, 2001/924/EC, 2006/75/EC, 2006/76/EC, 2006/849/EC and 2006/850/EC (L103, pages 101-109)

²⁵ ECB Reference: BN BAI/SRR/05/129.

²⁶ BNB, "Costs, advantages and drawbacks of the various means of payment", 16 Dec. 2005 (available at www.nbb.be)

²⁷ NVB, "Betalen kost geld", March 2004 (available at www.nvb.nl)

²⁸ "Costs and income in the Norwegian payment system 2001: An application of the activity based costing framework", by Olaf Gresvik and Grete Øwre (WP 2003/8)

According to the European Central Bank's study²⁹ conducted in 2012, cash is ultimately the most common used mean of payment, as chosen in 69,12% of transactions of the countries participating to this survey, and in 64,57% of transactions in the, at the time of the study, 27 EU Member States.

European Commission's 2015 report³⁰ regarding the data collection on merchants' costs of processing cash and card payments showed a difference in the usage of cash, with almost 60% of face-to-face transactions involved usage of cash.

4.7 Customer education

Banks' customers (i.e. retailers and end-users) should be educated about the societal cost of cash as well as about the risks cash handling involves.

Financial literacy measures through the implementation of relevant programmes³¹ for all customers (existing and/or newcomers), including those who do not want or are not able to use digital banking services, should be encouraged.

National banking communities will in this respect be encouraged to develop customer-targeted information about the actual security issues and costs generated by the use of cash, as well as to support the creation of national Banknote-Watch-like organisations and develop campaigns aimed at convincing the public that "*a stained note is probably a stolen note*" (Banknote Watch International).

²⁹ ECB, "The social and private costs of retail payment instruments – A European perspective", September 2012 (available at <https://www.ecb.europa.eu/pub/pdf/scpops/ecbocp137.pdf>)

³⁰ EC (DG Competition), "Survey on merchants costs of processing –Cash and card payments", March 2015 (available at http://ec.europa.eu/competition/sectors/financial_services/dgcomp_final_report_en.pdf)

³¹ A notable example is the so-called 'European Money Week' program, currently being implemented at a pan-European level. Additional detailed information pertaining to this program can be found at: <http://www.europeanmoneyweek.eu/>

5 Roles of and requirements for third parties

Third parties are service providers contracted by National Central Banks and/or banks when outsourcing certain steps in the cash processing chain, or - if allowed - independent service providers (the legal regime applicable to them currently differs from one country to another). What follows are some best practices that banks should take into account when outsourcing part of their cash processing business.

5.1 Third parties in the cash cycle

The most obvious third parties involved in cash distribution and recirculation activities are “professional cash handlers” (PCHs), covered under the scope of the Eurosystem Framework for the detection of counterfeits and fitness sorting - which created this new concept. This category of PCHs is believed to cover cash-in-transit (CIT) companies, represented in Europe by the European Security Transport Association (ESTA). Usual functions performed by CIT companies are: ATM management (including supply of cash to ATMs), network service, first level support for ATMs, counting and settlement of deposits, cash transport, packaging of notes and coins for NCBs, recirculation, storage, cash management, and the handling of foreign currencies.

Based on Regulation (EU) No. 1214/2011 CIT companies are allowed to provide professional transport of euro cash by a CIT vehicle by road of euro banknotes or coins.

However, other third parties are involved as well in the cash processing chain:

- The vending industry: represented in Europe by the European Vending Association (EVA). A vending machine, according to the EVA Statutes, is “a device aimed for the self-service sale or provision of goods and/or services that can be operated by entering a coin, a banknote, a token, a chip or other card/key or by other command. This does not cover entertainment and gambling machines”.
- Retailers: when providing “cash-back” services to their customers, i.e. a service initiated with a card at a point-of-sale (POS) terminal in which the transaction amount debited against the cardholders’ account is given to the cardholder by the merchant (either by merchant staff or through staff-operated machine) in whole or in part in cash, or when refilling ATMs. Retailers are mainly represented in Europe by EuroCommerce.
- Manufacturers (Banknotes Equipment Manufacturers (BEM)) or distributors of Automated Teller Machines (ATM): when delivering both customer-operated machines, staff-operated machines for recirculation of euro banknotes and euro coins, and/or devices for checking authenticity of euro banknotes and euro coins. Manufacturers are mainly represented by ATMIA (ATM Industry Association).
- Independent ATM deployers: service providers deploying ATMs independently from the banking industry (i.e. explicitly excluding subsidiaries of banks to which the operation of ATMs would have been outsourced), also represented by the ATMIA.
- Manufacturers of Intelligent Banknote Neutralisation Systems (IBNS) represented by EURICPA; Intelligent Banknote Neutralisation Systems (IBNS) rely mainly on the technology of banknote staining. Banknotes are locked in electronically monitored containers. Their electronic components, different sensors and software in the containers enable them to permanently control their status, automatically and immediately degrading their contents in the event of an anomaly or break-in attempt.
- Manufacturers of packaging, e.g. seal bags. These manufacturers have to work in close cooperation with CITs and IBNS manufacturers.

- New actors are able to integrate the cash cycle and provide banks and commerce with various products and services. It is obvious that they must be subject to the same regulations regarding all processes of the cash activities (if operated). These concerns a PSP subsidiary of a CIT company entering in the NHTO market.

But some examples in different countries show that this is not the case, i.e. where a company provides retailers with ATM to directly recirculate the till without having controlled the quality of banknotes. Regulators have to maintain the legal level playing field for all participants.

The supervisory regime of these third parties remains to be clarified, given that the Eurosystem has no regulatory powers over these actors.

Most of these market participants, classified under the broad category of “cash users”, are represented in the Euro Cash User Group (ECUG), co-chaired by the European Central Bank and the European Commission and which meets periodically.

A dialogue with third parties’ representatives will be opened (for instance in the framework of the ECUG forum) on issues of common interest, e.g., in the following areas:

- Fight against euro counterfeiting across the eurozone: coordinated actions involving all cash users, assessment of risks involved in cash recirculation practices by non-banks³².
- Cash processing efficiency: identification of best practices.
- Standardisation in different areas as stained banknotes, banknote/coin packaging, or harmonisation of security requirements for cash transportation.
- Reduction of the cost of IBNS, possible with economies of scale, which will overcome the reluctance to use them.
- Containing the societal costs of cash: dialogue and joint investigation on the societal cost of cash in the eurozone and on ways to contain/reduce it. A way to reduce the cost of cash is to reduce the cycle by recirculating banknotes at the same geographical point or by reducing the distances by implementing cross border transport. The digitalisation of banking implies a drastic reduction of bank branches with, as a consequence, a reduction of the business volume for the CIT companies. The fast increase of sales through the internet (35% a year) implies a decrease of cash as a way of paying with a reduction in the number of shops and the lower frequencies of the pickups. On the other hand, investments in fixed assets as buildings, trucks and IBNS can only be sustained by a certain business volume. Cross border transport (i.e. volume and economies of scale) is the only way to survive in the long term for the CIT companies. If not, the cost of the transport will increase for the banking and retail industry.
- The digitalisation of the economy and the decreasing usage of cash lead to fewer bank branches and fewer retail shops for CIT companies. Meanwhile, due to increasing fraud, the investment in fixed assets like cash centres, vehicles, IBNS systems, education of staff, etc. rise. This combination of factors leads to financial challenges for CIT companies and their clients, the banks. Keeping the costs of cash at a reasonable level in this situation means that a CIT company must have a sufficient annual turnover, i.e. economies of scale. Taking into consideration the existing cross-border problems for CITs, this could eventually lead to a highly concentrated CIT market in each euro country, giving rise to possibly business continuity issues and price increases. Effective cross border transport possibilities can counter this otherwise one-way path.

³² Cf. results of the EPC Cash WG survey on cash distribution and recirculating practices by non-banks (Cash-013/05)

5.2 Best practices for the outsourcing of cash handling activities to third parties

It is proposed that the EPC Cash Efficiency WG develops a list of national best practices that could be used by financial institutions as a basis for determining their relationship with CIT companies, in order to enhance the quality standards and productivity of the latter. The absence of an Internal Market for cash handling services is, however, an issue, as it creates obstacles to cross-border cash transportation and prevents banks from putting CIT companies in competition at eurozone level.

Examples of best practices already identified by the EPC Cash Efficiency WG³³ include the following:

- Reduction of float at security carrier depots: Notes Held To Order!
- Use of “smart” boxes (for security reasons)
- Optimisation of the service frequency as in efficient cash management
- Overnight servicing of branch ATMs (when allowed, while still considering security)
- Single access to the ATM location for servicing crews and mechanics. Required safety measures have to be in place

³³ Cf. Manual on Best Practices in ATM Cash Replenishment in Europe

6 Standardisation: process and focus

A number of eurozone-wide standards will be required to achieve SECA, and priorities have in this respect already been defined. What matters is interchangeability: it must be possible to withdraw/deposit coins and banknotes at any Eurosystem NCB and access the services they offer, throughout the whole eurozone, in a similar way and without any practical obstacle (e.g., different standards).

6.1 Process

For each of the areas where a need for standardisation has been identified, this Framework will define - from a banking industry perspective - some high-level requirements for the standards to be developed, and will identify ongoing standardisation activities in this area. These requirements will then be sent to the appropriate standardisation bodies for consideration, and the Cash Efficiency Working Group will monitor their implementation.

6.2 Priorities for further standardisation activities

6.2.1 Banknotes degraded by protection devices

Overall objectives are three-fold:

- The development of common European standards for banknotes degraded by protection devices such as a smoke or dye agent (IBNS³⁴ technology) would assist in promoting common security requirements for cash transportation in the Internal Market³⁵ and would subsequently assist in facilitating in particular cross-border cash transportation across the eurozone³⁶ - avoiding the risks of a costly levelling-up to the highest security standards in place in the EU.
- Common European standards for banknotes stained by protection devices would also create one common European market for cash degradation systems manufacturers (higher competition, economies of scale, lower prices) and increase interchangeability between service providers (professional cash handlers) for banks.
- Common European standards in this area would also facilitate the communication among stakeholders (banks, professional cash handlers, police, regulators, customers, retailers...) and allow the development of coordinated initiatives.

A number of actions have already been undertaken. The banking sector is discussing new initiatives on the protection of euro banknotes and coins against counterfeiting with other stakeholders such as the development of a standard marker for cash protection systems in collaboration with the European Intelligent Cash Protection Association ("EURICPA")³⁷ that is still in progress and parallel with the European Central Banks' R&D ongoing activity for common detection criteria for IBNS stained banknotes to be used by the Eurosystem, in collaboration with one major Ink supplier, four major Banknote Equipment Manufacturers (BEMs) and three Eurosystem central banks.

³⁴ IBNS: Intelligent Banknotes Neutralisation System

³⁵ Cf. Directive 2006/123/EC of the European Parliament and of the Council of 12 December 2006 on services in the internal market.

³⁶ Cf. EPC Resolution on 'Facilitating Cross-border Cash Transport in the eurozone' (Doc EPC-0374/03)

³⁷ For additional information: www.euricpa.org

In order to meet banks' needs, common European standards for cash degradation systems (IBNS) shall follow a number of essential requirements:

- Cross-border euro cash transportation across the eurozone should not be hampered by a larger use of IBNS: homologation criteria should be standardised, mutual recognition should be promoted, and standards should be of high quality³⁸ (ease of use, security, reliability).
- Cash degradation systems should be interchangeable: banks should be able to change as swiftly as possible from one professional cash handler or intelligent cash protection solution to another without undue barriers (e.g., adaptation costs). A certain degree of standardisation of the reception/host basis for IBNS would be convenient in this respect. The same applies with regard to the standardisation of banknote packages while the system's effectiveness depends on it.
- Cash degradation systems must be suited for different commercial usages, such as cash transports (i.a. sufficient volume), safes, ATMs, etc.: given the number of potential handlers involved in banknote circulation e.g., banks, cash-in-transit operators and retailers there needs to be a degree of system compatibility.
- Cash degradation systems need to warrant that the banknotes affected will be useless for criminals (i.e. they cannot be used as means of payment): the mutilation must send a strong, unmistakable signal that the banknote should not be acceptable for payments and it must be irreversible. Therefore a close and continuous dialogue must be organised between interested parties, in particular the ECB and the manufacturers (in particular in the context of new generations of banknotes), in order to find solutions which would guarantee the irreversible character of degradation.
- There should be strict procedures surrounding the detection of affected banknotes which lead to appropriate handling and investigation: detection and isolation and/or rejection by sorting machines and vending/change machines must be possible.
- Cash degradation systems should be designed in such a way that an accidental triggering would be absolutely minimised: procedures at central banks' level for the redemption for accidentally stained banknotes should be as simple and fast and as standardised across Europe as possible.
- Health and safety requirements need to be taken into account: for instance in case of accidental triggering, for cash transportation and processing of affected notes.
- Tracing should be promoted: the link between the stained banknotes and the cash degradation device (e.g., smart box) that has been attacked should be traceable (e.g., using DNA).

6.2.2 Coins and banknotes packaging

Current requirements relating to coin and banknote packaging are extremely demanding, generating substantial compliance costs. Requirements imposed to the banking industry include:

- Bundle types: content, number of coins/banknotes, single or multiple denominations
- Packaging: identification, traceability
- Special procedures for returning counterfeits and stained banknotes

³⁸ If not, European regulators will not accept the new standard as a security requirement substitute to armoured cash transportation for cash transportation in the Internal Market.

These NCB requirements widely differ from one country to another and need to be harmonised across the eurozone.

In order to meet banks' needs, common Europe-wide standards for euro coin and banknote packaging should be defined and follow a number of essential requirements:

- NCB cash services shall be interchangeable: it must be possible to withdraw and deposit euro coin and banknote standard packages at any Eurosystem NCB throughout the whole eurozone in a similar way (*no difference of standards*) and without any practical obstacle (*no difference of conditions*). This should furthermore be a free-of-charge service from Eurosystem NCBs.
- The number of packaging requirements should be as reduced as possible: NCB free-of-charge services should be progressively adapted to the latest technologies available in order to curb/cancel existing packaging requirements (the more requirements, the more costs): state-of-the-art technologies now indeed allow e.g., multi-layered and multi-denominational deposits and processing of banknotes, which would make processing at the bank offices or at the cash centers much easier and would save substantial costs for the banking industry.
- Packaging standards for unfit coins/banknotes: packaging standards for unfit euro coins/banknotes should be harmonised as well and as much as possible aligned with packaging standards for fit euro coins/banknotes.
- Coin/banknote standard packages must be suited for different commercial usages, such as cash transport, safes, ATMs, etc.: given the number of potential handlers involved in banknote circulation e.g., banks, cash-in-transit operators and retailers there needs to be a degree of system compatibility.
- Compatibility with cash degradation systems: banknote standard packages need to be compatible with cash degradation systems (e.g., smart boxes, smart containers, smart trucks...).

6.2.3 Common security requirements for euro cash transportation

The harmonisation of the EU legal framework for the provision of cash services, and in particular cash transportation services, is generally supported as it will encourage service providers to expand their activities across borders and thereby contribute to enhance competition, innovation and growth. An efficient choice of routes will contribute to reduce time in circulation which means less security risks and fewer ecological impacts on the environment. It could also be taken as an option when facing issues related to business continuity.

Given the crucial public security aspects involved in CIT services, any implementation of the "country of origin principle" should be strictly subject to the prior adoption of harmonising measures by the European Commission.

With this regard, and whilst legislation should remain technology-neutral, the harmonisation of modalities for performing cash-in-transit activities could be largely facilitated by the development of IBNS (Intelligent Banknotes Neutralisation Systems) technology, avoiding the risks of a costly levelling-up to the highest security standards in place in the EU. Any EU legislation in this area should thus refrain from detailed technical harmonisation and favour a flexible enough framework legislation that would only regulate the essential requirements, leaving room for IBNS development - which has proven to be a -secure and less costly alternative to armoured cash transportation (protection of truck and foot transport with the use of "intelligent trucks" and of "smart boxes") - as well as other industry standardisation initiatives.

6.2.4 Standardisation in ATM cassettes

Decreasing the costs, it would allow economies of scale.

7 Glossary

Additional services	Cash services provided by NCBs going beyond their core functions
ATMs (Automated Teller Machines)	An unattended electronic self-service and customer-operated device that allows a cardholder to make cash withdrawals
ATMIA	ATM Industry Association
Authenticity	Genuineness of a banknote or coin
BANCO	ESCB Banknote Committee
Bank	Credit institution having a banking license
Banknote	A banknote is a piece of physical money with a set denomination issued by a central bank as legal tender. With coins, banknotes make up the cash forms money.
BEM	Banknotes Equipment Manufacturers
Cash	Banknotes and coins denominated in a currency
Cash-back	A service initiated with a card at a point-of-sale terminal in which the transaction amount debited against the cardholders' account is given to the cardholder by the merchant in whole or in part in cash.
Cash centre	Interbank service point for cash services
Cash in circulation	Banknotes and coins issued minus vault cash held by banks
Cash in transit (CIT)	Cash being transported from one business to another, or between two parts of a business
Chain	Sequence of processing steps in the cash distribution/recirculation process
CHTO	Coins Held To Order
CIT Company	Usual functions performed by CIT companies are: ATM management (including supply of cash to ATMs), network service, first level support for ATMs, counting and settlement of deposits, cash transport, packaging of notes and coins for NCBs, recirculation, storage, cash management, and the handling of foreign currencies.
Coin	A small piece of metal, usually flat and circular, authorised by a government for use as money.
Core functions	Cash services that central banks are obliged to provide (free of charge) to the banking industry

Counterfeit	Banknote or coin that is not genuine
DECS	Data Exchange for Cash Services
Denomination	One of a series of values in a system of currency
ESCB	European System of Central Banks (currently 28 EU countries)
ESTA	European Security Transport Association
EURICPA	European Intelligent Cash Protection Association
Euro	The single currency of the European Economic and Monetary Union (EMU) introduced in January 1999.
Eurosistem	Eurozone System of Central Banks (NCBs of currently 19 euro countries + European Central Bank)
Eurozone	The European Economic and Monetary Union (EMU). EMU members are currently Austria, Belgium, Cyprus, Estonia, Finland, France, Germany, Greece, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Portugal, Slovenia, Slovakia and Spain (19 EU countries in total).
EVA	European Vending Association
Fitness	Meeting a certain number of quality standards
Framework	Set of rules and best practices
IADs (Independent ATM Deployers)	Service providers deploying ATMs totally independently from the banking industry (i.e. explicitly excluding subsidiaries of banks to which the operation of ATMs would have been outsourced)
IBNS	Intelligent Banknote Neutralisation Systems
Lodging	Deposit of cash at a NCB branch
NCB	National Central Bank
NHTO	Notes Held To Order
OTC (Over the Counter)	At the teller of a bank branch
Package	Bundle of banknotes or coins
Processing	Handling of the wholesale cash cycle chain (transport, sorting, counting and storage)
PCH (Professional Cash Handler)	Non-bank professional cash handler, including CIT company
(Cash) Recirculation	Cash re-issued to customers and not returned to NCBs

Retail cash	Cash in circulation at the level of banks' customers (individuals and retailers)
SECA (Single Euro Cash Area)	The eurozone - once the provision or sourcing of cross-border wholesale and retail cash services will be possible under the same conditions than the provision or sourcing of equivalent domestic services
SEPA (Single Euro Payments Area)	SEPA will be the area where citizens, companies and other economic actors will be able to make and receive payments in euro, within Europe (currently defined as consisting of the EU 28 Member States plus Iceland, Norway, Liechtenstein, Switzerland, Monaco and San Marino), whether between or within national boundaries under the same basic conditions, rights and obligations, regardless of their location. ³⁹
SEPA Scheme	A SEPA payment scheme is a common set of business rules, practices and standards for the provision and operation of a SEPA payment instrument agreed at interbank level in a competitive environment.
SLA (Service Level Agreement)	A contract between a network service provider and a customer that specifies, usually in measurable terms, what services the network service provider will furnish.
Stained notes	Banknotes maculated using IBNS technologies
Third-party ATMs	ATMs deployed by service providers totally independently from the banking industry (i.e. explicitly excluding subsidiaries of banks to which the operation of ATMs would have been outsourced). These service providers are called Independent ATM Deployers (IADs).
Vending machine	A device aimed for the self-service sale or provision of goods and/or services that can be operated by entering a coin, a banknote, a token, a chip or other card/key or by other command. This does not cover entertainment and gambling machines.
Wholesale cash	Cash in circulation in the interbank space (i.e. between central banks, banks and/or their respective outsourcers)
Withdrawal	The act of taking out cash from an account

³⁹ The definition of SEPA is part of the EPC Roadmap approved by the EPC Plenary in December 2004.